The EPIC (Excellent Practice in Communication) Project. Neurosurgical Nursing Clinical Handover Improvement Practices among acute inpatients: a Best Practice Implementation Project.

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Abstract

The nursing handover normally occurs at the beginning of a nurse's shift and is considered essential for continuity of care. Nursing handover has the potential to communicate accurate information about a patient's condition, treatment and anticipated needs but also has the potential to be ineffective or even harmful if information is incomplete or omitted. The Australian Commission on Safety and Quality in Health Care (ACSQHC) has recognised clinical handover as a National Standard, thus reinforcing its importance.

This project aimed to conduct an audit of nursing clinical handover practices, to implement evidence-based best practice recommendations and to maximise the effectiveness of clinical handover in a neurosurgical unit of a large tertiary hospital.

The project used the Joanna Briggs Institute's (JBI) Practical Application of Clinical Evidence System (PACES) and Getting Research into Practice (GRiP) audit tool for promoting change in healthcare practice. A baseline audit of 30 observations of nursing clinical handover was conducted and measured against seven best practice recommendations, followed by the implementation of targeted strategies and follow up audits.

The baseline audit revealed deficits between current practice and best practice in four of the seven criteria. Barriers for implementation of nursing clinical handover best practice criteria were identified by the project team and a neuroscience specific nursing handover framework and bundled education strategy was implemented. There were improved outcomes across the best practice criteria in the follow up audit.

The findings showed how audit may be used to promote best practice in healthcare and that focussed education and provision of relevant resources can have an immediate and positive impact on clinical practice. Some of the measured criteria improved to a moderate degree, leaving plenty of room for improvement, however by the end of the project attitudes towards nursing clinical handover had been 'transformed' from a passive, routine 'must do' task, to an active process with a focus on safety and patient/carer engagement. Future audits are planned to ensure sustainability.

Keywords: *Nursing clinical handover; evidence implementation; best practice; audit; acute neurosurgical inpatients.*

Background

The nursing handover normally occurs at the beginning of a nurse's shift and is considered essential for continuity of care (Clemow, 2006; Evans, Pereira and Parker, 2008; Currie, 2002; Fenton, 2006; Sexton, Chan, Elliott, Stuart, Jayasuriya and Crookes, 2004; Davies and Priestley, 2006; Hopkinson, 2002; McFetridge, Gillespie, Goode and Melby, 2007). The purpose of nursing handover is to safely transfer the care of a patient from one nurse and shift to another. Communicating information regarding the patient and formally handing over the responsibility for a patient to another nurse/shift is also key in providing guidance and support to the nurses (Evans, Pereira and Parker, 2008). A safe and accurate nursing handover is of utmost importance as

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this will directly impact the care provided by the following nursing shift (Currie, 2002; Fenton, 2006). Nursing handover has the potential to communicate accurate information about a patient's condition, treatment and anticipated needs but also has the potential to be ineffective or even harmful if information is incomplete or omitted. This has important implications for neurosurgical nursing staff as they often deal with fluctuating or subtle changes in neurological symptoms that if not communicated effectively can lead to rapid and life threatening deterioration in this challenging cohort of patients.

The Australian state of New South Wales (NSW) mandates the implementation of standard key principles for all types of clinical handover (New South Wales Ministry of Health, 2009). The associated policy has identified clinical handover as the transfer of information, accountability and responsibility for a patient or group of patients which aids in effective, concise and complete communication in all clinical situations, thus facilitating care delivery which will contribute to improved safety during patient care. These principles are to be used by all clinicians regardless of a patient's clinical diagnosis, location or the time of day. The purpose of this policy directive indicates that compliance will improve patient outcomes and experiences. Mandatory requirements include health service implementation, evaluation, training and orientation. The policy also includes roles and responsibilities of the health service executives responsible for clinical operations and governance, and of hospital, facility, clinical stream, unit managers and heads of departments.

This project aimed to conduct an audit of neurosurgical nursing clinical handover practices, to implement evidence-based best practice recommendations and assess the impact of these changes in improving the effectiveness of nursing clinical handover in a neurosurgical unit of a large public tertiary referral hospital and major trauma centre in Sydney, Australia. The hospital has a strong commitment to teaching and research across a wide range of disciplines and serves between 1.3 and 1.4 million people in the South West of Sydney, with the most culturally diverse population in the state with 39% of people from non-English speaking backgrounds (NESBs). The hospital has well established policy directives on nursing clinical handover for inpatients including established roles and responsibilities of clinicians to ensure their work practices are standardised. Key principles embedded within this policy directive include leadership, valuing handover, participation, timing, location, process and identifying deteriorating patients.

Objectives

The overall purpose of this project was to increase staff compliance with nursing clinical handover best practice recommendations and ensure there was timely, relevant and structured clinical handover that supported safe patient care. Objectives included:

- To improve the local practice of delivering nursing clinical handover
- To ensure nursing staff have been educated regarding standards and the policy of clinical handover
- To ensure patient and family engagement in the clinical handover process

An evidence–based practice approach underpins the entire implementation project.

Methods

The project used the Joanna Briggs Institute (JBI) Practical Application of Clinical Evidence System (PACES). JBI PACES is an online tool for health professionals and/or researchers to use for collection and comparison of data and to conduct efficient audits in small or large healthcare settings. PACES has been designed to facilitate the use of audits to promote evidence informed health practice and includes the Getting Research into Practice (GRIP) framework that may be used to help identify factors underpinning gaps between practice and best practice and strategies to overcome them. The project involved three phases as follows:-

Phase 1: Baseline audit

A baseline audit of neurosurgical nursing clinical handover practices was conducted. A core group of key stakeholders was formed to support the work of this project. The project team included the Clinical Nurse Consultant, Nursing Unit Manager, Clinical Nurse Educator, Registered Nurses, the Hospital Library Manager and a consumer representative. Involvement of the project team was in varying capacities

of support, data collection, data entry and/ or participation.

The objectives of the baseline audit were to establish the size and nature of the gap between practice and best practice in neurosurgical nursing clinical handover. The JBI best practice recommendations related to clinical handover are based on a structured search of the literature and selected evidence-based health care databases. Seven criteria based on these best practice recommendations were audited throughout this project. The seven identified criteria for data collection were measured as follows:

1. Verbal (face to face) communication has occurred
This criterion was considered met if the handover had occurred at the bedside in the presence of the patient (and family members if applicable).
The nurse/s from the concluding shift must have communicated to the nurse/s on the preceding shift and engaged in discussion about care coordination with the patient/ family members in a face-to-face manner.
The event should have commenced with a statement to the patient/family member that handover was occurring and team members were going to speak about their clinical care.

Note: this event was expected to occur on all patients despite level of consciousness, and for all non-English speaking patients/ family members.

2. Standardised documentation has been used.
This criterion was considered met if handover had been delivered using standardised documentation including use of an electronic nursing handover tool.

3. The patient had been identified.
This criterion was considered met if the patient's full name had been stated clearly in the handover communication and the patient's identification (ID) band had been checked. *Note: Unknown patients remain unknown for 24hrs*.

4. Relevant History of the patient had been stated.
This criterion was considered met if the reason for hospital admission and relevant medical/clinical history had been clearly stated.
This must have included:

- Presenting symptoms/events on admission/provisional diagnosis
- A brief synopsis of treatment to date / test results – including recent Medical Emergency Team & Clinical Review Criteria calls, Falls etc
- Relevant medical history and co-morbidities

Note: Sensitive information was discussed in a private area outside the patient's room e.g. Not for Resuscitation (NFR) orders

5. Detailed observations of the patient had been stated.
This criteria was considered met if reference to the patient's vital sign status, Glasgow Coma Score (including a breakdown of E,V,M), motor sensory status, frequency and other relevant observations have been stated including altered haemodynamic parameters (altered calling criteria), if applicable, and bedside observations charts are checked together. Vital signs included:

- Blood pressure
- Pulse rate
- Respiratory rate
- Temperature
- Oxygen saturations
- Pain Score
- Glasgow Coma Score (if applicable)
- Motor Sensory scores (if applicable)

Other relevant observations (if applicable) included:-

- Post Traumatic Amnesia score
- Pressure area risk
- Falls risk score
- Fluid balance
- Drains
- Blood Glucose level

It was acceptable to state that the patient's vital signs were 'Between the Flags' if there were no abnormalities, however bedside observation charts should have still been checked together.

If the patient's vital signs were NOT between the flags, there should have been specific mention of this particular vital sign.

Note: If the patient was on an end of life care pathway, this was stated and no observations were performed.

Note: The Between the Flags program is a state wide standardised safety initiative

that aims to improve early recognition and response to clinical deterioration. This program includes several different measures that have been implemented to improve the ongoing recognition and response to clinical deterioration. Key aspects of the program include a structured clinical assessment tool and a communication tool.

6. The handover process included an agreed plan of care for the patient.
This criterion was considered met if the care required for the following shift was clearly described and assessments / nutritional status / tests / procedures / medications / documentation pending were stated (e.g. Nursing Admission Form, Falls Risk Assessment and Management Plan – FRAMP, External Ventricular/Lumbar Drain management)

7. Transfer of responsibility of the patient from one nurse/shift to another nurse/shift had occurred.
This criterion was considered met if time had been provided to clarify and ask any questions (nurse and/or patient, parent, family member) and the nurse/s receiving handover accepted responsibility and accountability for care.
This may have included a verbal statement or written entry in the progress notes that the nurse had received handover and had accepted care, or a question such as "Are you happy to take over care?"

Nursing staff within the neurosurgical unit were notified of the project before commencement. This involved a description of the proposed project and how it involved them as well as distribution of a Participant Information Sheet/Statement. Nurses were given the opportunity to opt out by provision of an opt out form. If clinicians exercised this right, none of their clinical handover interactions were audited. The nurses were informed during ward meetings that auditing would occur during selected dates but were not given those exact dates. Nurses absent from ward meetings were informed of the project via an individual or small group meeting and given the Participant information Sheet/Statement by the ward based investigators. A poster informing staff of the study with processes for obtaining a Participant information Sheet/ Statement and opt out processes and forms was also displayed prominently in the unit.

Audits occurred during Monday to Fridays and included a combination of night to morning shift and morning to afternoon shift handovers. 30 episodes of clinical handover were included in the sample of each criterion. One auditor, the Clinical Nurse Consultant (CNC), was nominated to undertake all 30 episodes of data collection.

To assess the compliance of each audit criterion, the CNC, aligned to the unit, who might normally participate in a nursing clinical handover as part of her everyday work joined the bedside handover and performed an observational audit. During this routine bedside handover, the CNC audited the content of the handover against the 7 criteria, as well as the time and day of the week the handover was occurring. The investigator (CNC) made simple marks in a 'yes', 'no', 'N/A' box on a data collection form whilst listening to handover. The form was discreet and easily held within normal handover paperwork hence nurses were not aware exactly when their handover was being audited. Baseline data was collected over a two week period and entered into the PACES program.

Phase 2 – GRIP Strategy

The objectives for the second phase of the project were to gain an understanding of the barriers underpinning gaps between practice and best practice found in the baseline audit and implement tailored strategies to close gaps and address barriers.

Using the PACES program, baseline audit results were analysed and discussed by the project team with the aim of proposing strategies for improving compliance with best practice nursing clinical handover principles. This process was implemented using the JBI Getting Research into Practice (GRIP) tool, a module of the PACES program, and facilitated the change management process.

Open communication and engagement with all with stakeholders was maintained and welcomed at all times throughout the project and provided the platform to suggest and discuss strategies for improvement. Via a fortnightly, face-to-face meetings, using practice development principles and e-mail correspondence between the project team, the best practice criterion was reviewed and

strategies for improved compliance were formulated.

Furthermore, potential barriers and strategies to overcome such barriers, as well as resources required to implement change strategies were identified, discussed and formally documented into the GRIP framework. The GRIP strategies are presented in the results section of this report.

A GRIP report matrix was generated and fostered the project team engagement by keeping them informed, as well as providing a means of gathering and recording their opinions and clearly outlining the implementation plan and the team involvement. As described further in the results section, a major strategy identified to close the gap between practice and best practice was the development of an education 'bundle' and neuroscience nursing clinical handover framework used to educate clinicians on the 7 best practice recommendations for nursing clinical handover and imbed them into practice. These strategies, were implemented during Phase 2 of the project which was conducted over a 4 month period.

Phase 3: Follow up audit

The objective of the post intervention follow up audit was to assess whether any improvement in compliance with best practice had been achieved and identify any areas requiring further focus and improvement. The repeat audit used the 7 criteria defined in Phase 1. There were no variations to the topic, the criteria, the sample size, the characteristics or location of the project during the follow up cycle.

The follow-up data was entered into the PACES program and data analysis comparing follow-up results with those of the baseline audit were undertaken to examine any change in compliance rates. Phase 3 was conducted over a 4 week period.

The project received formal approval by South Western Sydney Local Health District Research Ethics Committee (NSW).

Results

Baseline Audit

The percentages for compliance with each audit criterion from the baseline audit are shown in Figure 1.

The best baseline performance was found for Criterion 1, which measured that verbal face to face communication had occurred, Criterion 2 which measured the use of standardised documentation with nursing clinical handover and Criterion 7 which measured that transfer of responsibility of the patient from one nurse/shift to another nurse/shift had occurred. In 100% of cases there was evidence of these practices occurring via the use of bedside handover practices and an electronically generated handover document that was well established and embedded into practice. Furthermore, Criterion 6 displayed 90% compliance with the handover including an agreed plan of care for the patient, and Criterion 5 displayed a 73% compliance with details of patient observations being stated.

Performance emerged as very poor in the baseline audit for the remaining two criteria. Identifying the patient (Criterion 3), which encompassed stating the patient's full name and reviewing the identification band, scored extremely poor at 0% and stating the relevant history of the patient (Criterion 4) showed compliance of only 60%.

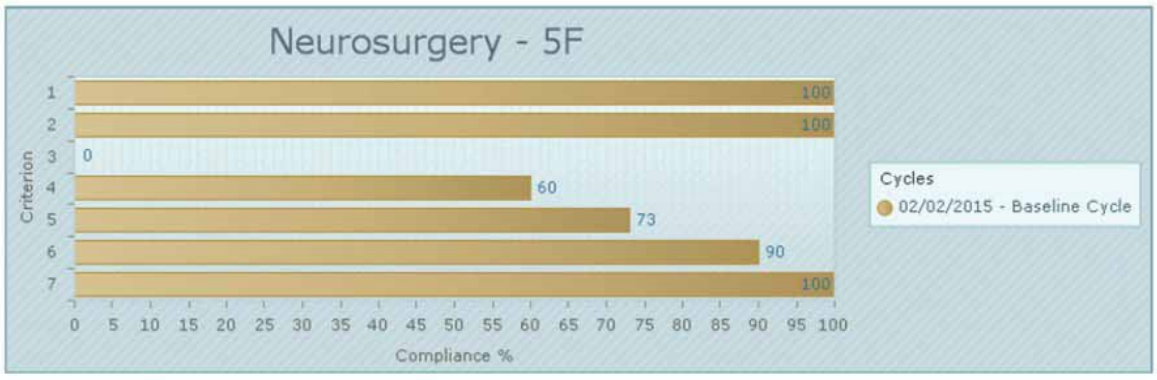

Figure 1 *(Above): Baseline audit results*

Phase 2: Strategies for Getting Research into Practice (GRiP)

Providing education to the nursing staff was elected by the project team as a feasible strategy to address the identified deficits in compliance to best practice for neurosurgical nursing clinical handover. An education 'bundle' focusing on the 7 best practice criteria identified by JBI was developed. This package included:

1. A powerpoint presentation detailing the project team, study design, best practice recommendations and baseline results. This presentation was loaded onto unit based computers and could be accessed by all staff.
2. Development of an in-house video demonstrating an incorrect and a correct handover based on the 7 identified best practice criteria to be utilised as a teaching tool.
3. Intensive education sessions regarding the project and highlighting the 7 best practice criteria. The video was utilised in these sessions.
4. Recruitment of a 'Clinical Handover Champions' to support and role model the education strategies.
5. A3 sized wall posters, to be displayed prominently in clinical areas highlighting the 7 best practice criteria.
6. A4 size best practice criteria signs presented in a table format, displayed in patient bedside charts. These signs highlighted the 7 best practice criteria accompanied by a practical checklist indicating tasks that satisfy each criterion.
7. A credit-card sized checklist tabling the seven best practice criteria was developed to clip onto each nurses' identification badge. All nurses were issued with this checklist as an easy reference.

Further to this, a neuroscience nursing clinical handover framework or 'ground rules' was collaboratively developed to assist in addressing identified deficits in compliance to best practice for neurosurgical nursing clinical handover (See Appendix 1). Using practice development methodology in a neuroscience / brain injury community of practice group, this tool was developed with input from frontline staff and was made available in the neuroscience clinical areas, embedded into the unit orientation, and became 'the rules' around conducting handover.

Table 1 shows the barriers to nursing clinical handover best practice that emerged from the project team discussion of the phase 1 results. It also identifies the necessary resources required to implement the strategies and outcomes.

Phase 3: Follow-up audit

The percentage of compliance for the audit criteria found in the follow-up audit together with the results from the baseline audit are displayed in Figure 2. Looking at the results of the follow up audit, compared with those in the baseline audit, there has been an overall improvement in compliance of implementing best practice clinical handover recommendations.

Figure 2 *(Above): Follow-up cycle 1 audit results*

Table 1 *(Below and over page): Barriers & resources to nursing clinical handover*

Barrier	Strategy	Resources	Outcomes
Educating a large number of nursing staff in a systematically and coordinated manner.	Implementation of an agreed timeline for the education period Use standardised information & resources Recruitment & training unit 'nursing handover champions' to assist with implementing the education & imbedding the best practice criteria into normal routine practice	Formation of an agreed timeframe / timeline Development of a presentation and handover framework Development of a generic video to utilise as a teaching tool to demonstrate /compare a correct vs incorrect handover to highlight the best practice criteria Development of posters, laminated checklists & ID size badges identifying the 7 best practice criteria & highlighting points that contribute to satisfying each criterion.	Completion of the education component by agreed date Target of >90% of nursing staff attended education sessions
Overcoming nursing staff misconceptions that the nursing clinical handover would take longer to complete if adhering to best practice criteria	Employing practice development strategies during the education sessions to discuss nursing staff concerns Conduct solution focused sessions to address anticipated / perceived issues with time constraints in implementing all best practice recommendations for clinical handover Development of an in-house video as a teaching tool to demonstrate incorrect vs correct handover and practical time frames	Project team members had undergone Practice Development and Leadership courses hence these skills were employed during the discussion component of the education sessions to guide and enable staff. Solution focused techniques centred around improved communication were used emphasising improved patient safety and care Development and display of a video demonstrating incorrect vs correct handover to demonstrate feasibility and practicality of best practice criteria	Facilitated discussion occurred as part of the sessions Improved follow-up audit results Staff articulated that they felt confident in utilising identified strategies
Nursing staff concerns related to maintaining patient confidentiality at the bedside in multi-bed rooms	Employing practice development techniques during the education sessions to discuss nursing staff concerns and conduct solutions focused sessions to address anticipated / perceived issues with maintaining patient confidentiality during the handover process	Using practice development methodology project team members guided & enabled staff to identify probable situations/scenarios that could compromise patient confidentiality during clinical handover. Nursing staff identified strategies to prevent breaches of confidentiality eg: discussing sensitive information outside the patient's room or at the nurse's station	Nil complaints recorded from patients related to perceived or actual breaches in their confidentiality Improved follow-up audit results
Nursing staff concerns re checking patient Identification (ID) bands eg: wakking or isolated patients,.	Employing practice development techniques during the education sessions to discuss	Using practice development methodology project team members guided and enabled staff	Staff articulated that they felt confident in employing identified strategies to complete a patient ID

Table 1 continued *(Below and previous page): Barriers & resources to nursing clinical handover*

Barrier	Strategy	Resources	Outcomes
Nursing staff not participating in the practice of reviewing bedside charts together during clinical handover	Displaying & discussing results of baseline audit, whilst employing practice development techniques during the education sessions, regarding current barriers to checking bedside charts together during handover Solution focused discussions conducted to support practice change, emphasis placed on the critical role that bedside chart review plays in maintaining patient safety	Using practice development methodology project team members guided and enabled staff to identify probable situations/scenarios that could negatively impact on patient safety and care, related to not checking bedside charts during clinical handover Nursing staff identified strategies to assist with embedding the practice of checking charts during handover eg: referring to checklist, reminding each other every shift to implement and maintain best practice (Criterion 5)	Improved follow-up audit results for Criterion 5, stating detailed observations of the patient
Nursing staff concerns re checking ID bands on patients eg: waking patients, patients isolated due to infection prevention, offending patients who expect nurses to already know their identity and be familiar with their admission	• Employing practice development techniques during the education sessions to discuss nursing staff concerns and conduct solution focused sessions to address anticipated / perceived concerns with checking the patients ID band during the handover process	Using practice development methodology project team members guided and enabled staff to identify probable situations/scenarios that could impair their ability and desire to check a patients ID band during clinical handover. • Nursing staff identified strategies to overcome concerns about patient ID band checks eg: explaining to the patient the rationale for checking their ID band	Staff articulated that they felt confident in employing identified strategies to complete a patient ID check during nursing clinical handover Nil nursing reports of any compromises in patient confidentiality Nil patient complaints recorded related to breaches in confidentiality Improved follow-up audit results for Criterion 3, patient identification.

The results suggest that an emphasis on staff education translated into implementation in practice or sustainability of practice for all criteria. Four out of the four criteria requiring improvement showed positive progress, with the remaining three criteria remaining static at 100% compliance. The criterion measuring that the patient had been identified (Criterion 3), showed the largest increase in compliance over baseline with improved changes of 96%.

Discussion

Results from the baseline audit were not unexpected by the project team. It had not, until recently, been standard nursing practice in all units at the hospital to perform bedside handover at each change of shift. Rather, nursing handover had been performed in the nursing write up bays. The Neurosurgical Unit, however had well established bedside handover practice which essentially involved a cultural change in the way the staff physically approached and performed nursing clinical handover but was now reflected with a willingness by nurses to engage and acknowledge the importance of respectfully including the patient in their own care.

The practice of nurses handing over at the bedside, engaging patients and utilising standardised documentation to assist with the process of clinical handover was well embedded prior to the commencement of the study and was clearly demonstrated in compliance scores of 100%. A standardised nursing clinical handover document was created in the electronic medical record and successfully piloted in the Neurosurgical Unit in 2011 before proceeding to a hospital wide roll-out in 2012. This electronic handover is now used throughout several local health districts and is presently being implemented in others states of Australia.

In contrast to the embedded practice of engaging the patient at the bedside and using standardised documentation, identifying the patient via use of their full name and checking their identification band resulted in very poor compliance of 0%. Nursing staff routinely stated the patient's name as part of the handover, but checking the patient's identification band with the patient and against their charts was not routine practice. Reasons put forward by staff to account for this included that it would take too long, they were already familiar with the patient and that the patient may expect that the nurses already know their identity and as such, patients may be offended if they were re-identified at every shift change. Also, patients who appeared to be sleeping, or at the least, resting with their eyes closed, should be allowed to continue undisturbed by an identity confirmation. Despite these reasons, there was acknowledgement by the nursing staff that checking patient identification was safe practice especially with non English speaking and cognitively impaired patients. Standard 5 of the ACSQHC, titled Patient Identification and Procedure Matching, is now a key driver of patient identification processes (Australian Commission on Safety and Quality in Health Care, 2012). This standard states, a patient identification and matching system is implemented and regularly reviewed as part of structured clinical handover, transfer and discharge processes. The baseline audit of 0% compliance was extremely alarming but following the education intervention, the follow-up cycle scored a compliance of 96%. The education focused on the evidence and risks of errors related to procedure and medication dispensing with supporting Incident Information Management System (IIMS) data. The 96% improvement reflected an enormous cultural practice shift with identification band checking becoming embedded into the routine handover process.

Additional nursing clinical handover practices that were demonstrated in the baseline audit were not unexpected to the project team. Nursing practice often omitted stating the patient's relevant medical history and detailed observations. Instead nurses often made generalised references to their colleagues as there appeared to be a general assumption that all staff were familiar with the patient and if not, they could refer to the standardised electronic handover document at a later point in time for more detailed patient information. The project team speculated that the handover document may have been seen as a written substitute for verbal communication. Further to this, the nature of neurosurgical units often leads to longer patient admissions giving staff more prolonged exposure, resulting in increased patient familiarity. The project team questioned if this discouraged nurses

from repeating a systematic process of nursing clinical handover every shift.

This best practice implementation project achieved improvements in compliance in the best practice recommendations over the six month period. These practices however had a more widespread impact on nursing clinical handover practices across the organisation because strategies were adopted and supported across the hospital and had the underpinning support of the nursing executive and governance structures. Also imperative to the success of this project was consumer participation and their very valuable contributions during every stage of the project implementation. This support is reflected in the improvement in compliance with the audit criteria and changes in practice.

The nursing clinical handover 'education bundle' and neuroscience nursing clinical handover framework incorporating best practice strategies and practical application were effective strategies. The content of the bundle included resources with information in line with the best practice recommendations including what to include in a clinical handover to ensure safe transfer the care of a patient from one nurse and shift to another. A highlight of the education bundle was the custom filmed video case study that was utilised to accompany the nursing education undertaken in phase 2. The video was produced in house and shows an incorrect versus correct version of nursing clinical handover and clearly demonstrates all seven best practice criteria with the use of pop up text embedded into the video. This was used as a discussion point to allow nurses to reflect on their practice and demonstrate how the criteria could be embedded into everyday clinical handover practices. It was positively received by the nursing staff and proved to be a realistic approach providing a practical demonstration of how the criteria could be applied.

Due to difficulties capturing all staff, 'clinical handover champions' were engaged in the education process and were given the education bundle so it could be delivered to after hours and weekend staff. In addition, they were empowered to take informal and formal opportunities to teach their ward colleagues to amplify and personalise the learning and make it ward specific. As a result, the neurosurgical nursing staff received tailored education and were more aware of the best practice recommendations for nursing clinical handover and how to incorporate this into their clinical practice. By the conclusion of the project 77% of nursing staff had received targeted neurosurgical clinical handover education.

A safe and accurate nursing clinical handover is of utmost importance and is a quality imperative that is directly related to the ACSQHC national standards (Australian Commission on Safety and Quality in Health Care, 2012). It is a priority for the neurosurgical unit to keep the focus on nursing clinical handover and excellent practice in communication in its efforts to improve patient safety and continue to meet this standard. Implementation of the evidence through this project will be sustained by continued analysis of IIMS data and sustainability audits. These principles are transferable to any clinical unit.

Conclusion

It is indisputable that ensuring timely, relevant, structured and accurate nursing handover that supports safe patient care is of utmost importance. The communication of information to enhance patient safety is paramount in any health care setting, and as such, the Australian Commission on Safety and Quality in Health Care (ACSQHC) has recognised clinical handover as a national standard.

The purpose of this project was to increase staff compliance with clinical handover best-practice within an acute neurosurgical unit. This included an audit of nursing clinical handover practices, implementation of evidence-based best practice and assessment of the effects of implemented strategies at maximising the effectiveness of clinical handover. The project succeeded in achieving the objectives as significant improvements in the best practice criteria was demonstrated after a targeted 'Education Bundle' and neuroscience nursing clinical handover framework incorporating best practice was implemented. While it is suggested that the implementation of evidence based best practices and improving clinical handover will improve patient care and outcomes and reduce adverse clinical incidents this cannot be assured on the basis of this project alone. Some criteria measured in this project did not improve to a great degree with moderate increases in compliance

leaving plenty of room for improvement. By the end of the project however, attitudes to nursing clinical handover within the neurosurgical unit been 'transformed' from a passive, routine 'must do' task, to an active process with a focus on safety and patient/carer engagement.

Future audits are planned to ensure changes are sustained and improved with the aim that the neurosurgical nursing staff not only improves communication and patient safety but can give an individualised, tailored approach and instil confidence in our patients and their carers that the unit is doing all it can to provide them with high quality patient centred care.

Nil conflict of interests are declared.

Thanks are extended to the CB5F Neurosurgical Unit leadership team, clinical handover champions and staff.

(Appendix over page).

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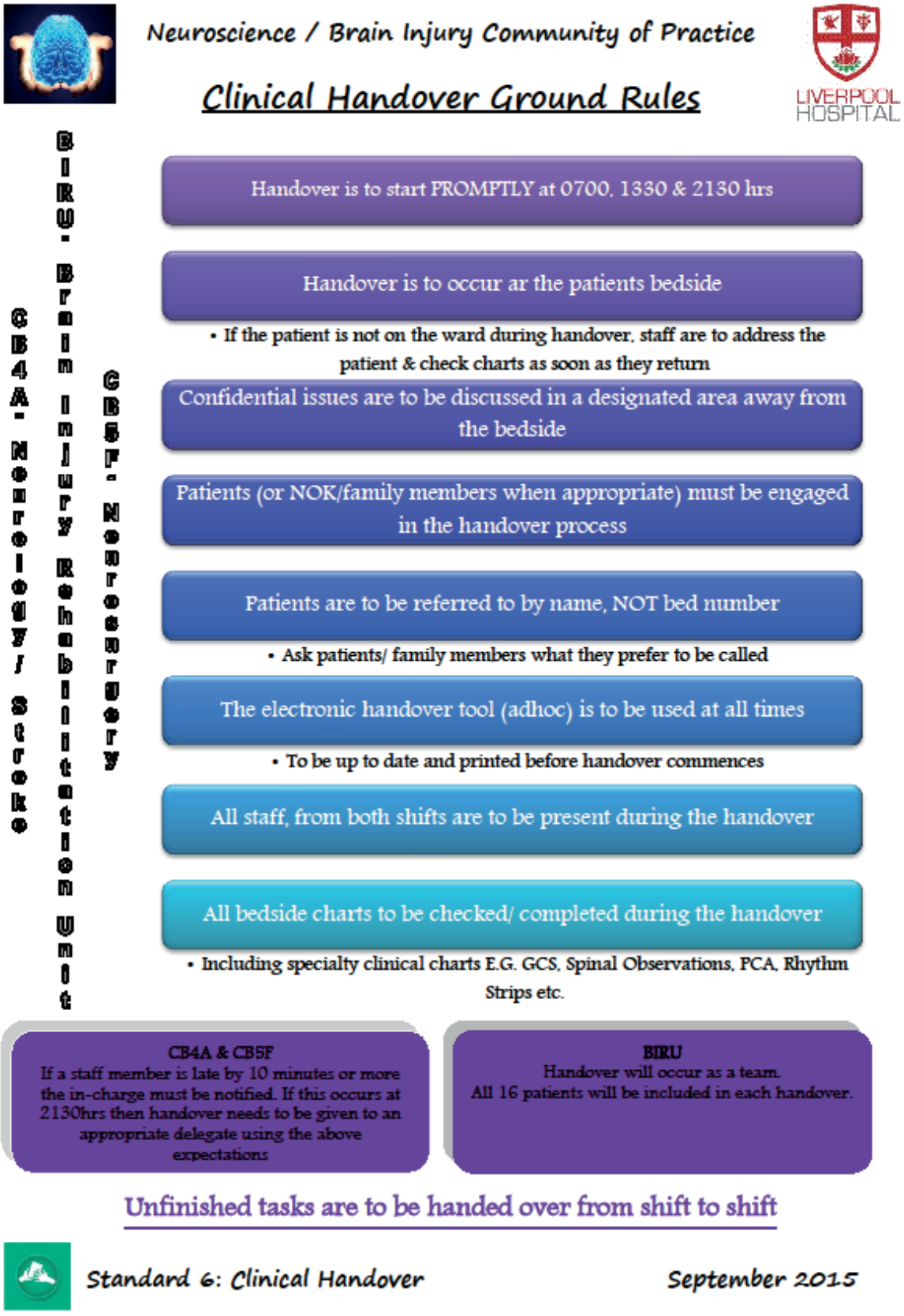

Appendix 1 *(Above): Clinical Handover Ground Rules*